

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) A continuous-treatment apparatus for subjecting a surface of a substrate for a display device, which is targeted for treatments, to continuous plural types of treatments, comprising:

a substrate carrier selectively holding the substrate and carrying the substrate along a carrying direction; ~~and~~

plural types of treatment units which are arranged side by side along the carrying direction of the substrate and which subject the surface, which is targeted for treatments, of the substrate to sequential different treatments at atmospheric pressure or at a pressure near atmospheric pressure; and ~~[[,]]~~

an annealing treatment unit disposed outside the plural types of treatment units and downstream from the plural types of treatment units in the carrying direction of the substrate, the annealing treatment unit being larger than each of the plural types of treatment units and, after the sequential different treatments, the annealing treatment unit subjecting an entire portion of the surface of the substrate, at the same time, to an annealing treatment;

wherein a combination of the plural types of treatment units may be changed at will and any desired type of treatment unit may be added;

wherein the substrate is carried by the substrate carrier while the surface targeted for treatments of the substrate is facing downward, and the plural types of

treatment units are operated upward to treat the surface of the substrate targeted for treatments;

wherein the apparatus is configured to allow excess liquid applied to the surface targeted for treatments, by at least one of the treatment units, to fall away from the surface after being applied to the surface; and

wherein the plural types of treatment units include a cleaning treatment unit having a nozzle that blows cleaning solution onto the surface targeted for treatments at an angle less than 45 degrees, and including a first top end surface and a second top end surface each disposed with a predetermined gap from the surface targeted for treatment, the first top end surface being connected to a side of the nozzle opposite an inclined end surface of the nozzle, the second top end surface being connected to an opposite surface from the inclined end surface of the nozzle, the opposite surface being perpendicular to the surface targeted for treatments and being connected to an inclined surface of the second top end surface near the surface targeted for treatments, the inclined surface of the second top end surface being inclined toward the nozzle, the cleaning treatment unit having a recovery path formed by the opposite surface and the inclined end surface of the nozzle, and wherein the recovery path is evacuated to a pressure that is less than atmospheric pressure.

2. (previously presented) The continuous-treatment apparatus according to Claim 1, wherein the substrate carrier comprises:

a suction portion removably suctioning and holding a surface targeted for holding, which is opposite to the surface targeted for treatments, of the substrate;

a guide component guiding the suction portion in the carrying direction; and
a driving portion transferring the suction portion along the guide component.

3. (cancelled)

4. (currently amended) The continuous-treatment apparatus according to Claim 1, wherein the plural types of treatment units comprise the cleaning treatment unit, a drying treatment unit, a surface modification treatment unit, and a liquid agent application treatment unit,~~and an annealing treatment unit.~~

5. (cancelled)

6. (currently amended) A continuous-treatment method for subjecting a surface of a substrate for a display device, which is targeted for treatments, to continuous plural types of treatments, the method comprising:

subjecting the surface, which is targeted for treatments, of the substrate to sequential different treatments at atmospheric pressure or at a pressure near atmospheric pressure through the use of plural types of treatment units arranged side by side along a carrying direction of the substrate while the substrate is held and the substrate is carried along the carrying direction by a substrate carrier; and

subjecting an entire portion of the surface of the substrate, at the same time, to an annealing treatment through the use of an annealing treatment unit disposed outside the plural types of treatment units and downstream from the plural types of treatment

units in the carrying direction of the substrate, the annealing treatment unit being larger than each of the plural types of treatment units, and the annealing treatment occurring after the sequential different treatments.

wherein the combination of the plural types of treatment units may be changed at will and any desired type may be added in accordance with the type of the object;

wherein the substrate is carried by the substrate carrier while the surface, which is targeted for treatments, is facing downward, and the plural types of treatment units are operated upward to treat the surface, which is targeted for treatments, of the substrate;

wherein excess liquid applied to the surface targeted for treatments, by at least one of the treatment units, is allowed to fall away from the surface after being applied to the surface; and

wherein the plural types of treatment units include a cleaning treatment unit having a nozzle that blows cleaning solution onto the surface targeted for treatments at an angle less than 45 degrees, and including a first top end surface and a second top end surface each disposed with a predetermined gap from the surface targeted for treatment, the first top end surface being connected to a side of the nozzle opposite an inclined end surface of the nozzle, the second top end surface being connected to an opposite surface from the inclined end surface of the nozzle, the opposite surface being perpendicular to the surface targeted for treatments and being connected to an inclined surface of the second top end surface near the surface targeted for treatments, the inclined surface of the second top end surface being inclined toward the nozzle, the cleaning treatment unit having a recovery path formed by the opposite surface and the

inclined end surface of the nozzle, and wherein the recovery path is evacuated to a pressure that is less than atmospheric pressure.

7. (cancelled)

8. (currently amended) The continuous-treatment method according to Claim 6, wherein the plural types of treatment units comprise the cleaning treatment unit, a drying treatment unit, a surface modification treatment unit, and a liquid agent application treatment unit, and an annealing treatment unit.

9. (cancelled)